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THE EDUCATIONIST.

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Editorial.

WE are disposed to suggest once more that steps be taken immediately to procure from County Superintendents a report setting forth as fully as practicable the results of their first year's work as such officers. The State Board of Education, we believe, meets sometimes in next month, and we shall be glad to learn that some consideration has been given this important subject.

THE removal of the State University to Indianapolis, and the establishment of a school of technology in connection with it and as a part of it, are results much to be desired. The present location of this institution is unfortunate for it and for the State. It should be at the capital. An opportunity will be soon offered to purchase of the United States government the extensive and beautiful grounds upon which the arsenal buildings are now located. This property is a little east of the city and in the immediate vicinity of Woodruff Place, and is just the place for such an institution as the State University ought to be. The interests of the State demand a school in which students can receive a technical education. Especially do the interests of Indianapolis demand this, and there has been no time more propitious than the present for making this change and founding such a school.

IN a brief examination of the Educational Year-Book for 1872, we were led to question the accuracy of the statistics, and so stated in a review of the book published some months since. A few days ago in turning through the book we discovered the following: Illinois has 641 graded schools, no colleges, and 3 universities. Indiana, 196 graded schools, 6 colleges, and 8 universities. Kentucky, no graded schools, 2 colleges, and 5 universities. Ohio, 600 graded schools, 23 colleges and 10 universities. Pennsylvania, 4998 graded schools, no colleges, and 1 university. Now what is a graded school? Is it a single school of a building, or all the schools of a building, or all the schools in a system of graded schools? Judging from the foregoing we imagine it is one thing in one place, and a very different thing anywhere else.

Then, what are colleges and universities? In the west the former are generally composed of grammar and high school students, and are conducted about as feebly as are our third-rate high schools. The latter, with few exceptions, are composed of about the same material, and are conducted very much in the same style. Of course they work under university charters, and if they can only attach a law or medical school, or even a business school, they consider their claims to the title indisputable. That is to say, a feeble college of literature and science, with a so-called commercial college attached, makes a university. We can not speak for Ohio that reports ten universities, but we can for Indiana that reports eight. The truth is, if we are to judge from the work done, and not from the charter under which it is done, or from the title by which it is usually known, Indiana has no university within her borders. She has at most but one or two institutions that can lay even a remote claim to be doing the work of an American university. As the Educational Year-Book for the year 1873 is soon to be published, we again express the hope that more care will be taken to procure for its pages reliable information.

SEX IN EDUCATION.

A little book has recently been written by Dr. Clark, late professor of Materia Medica in Harvard University, that promises to exert a wide influence in determining the method to be pursued in the education of girls. This book ought to be read by every parent and every teacher in the land. But we feel like cautioning these readers not to permit themselves to be carried along unresistingly by the swift current of the author's seductive reasoning, nor to ignore so fully as the author does the many things other than brain work, that unite to ruin the health of girls. It was not the author's purpose to discuss these, but only to show the evil effects of constant, continuous brain work during five or six days of every week, for four or six years, upon girls after they have attained their fourteenth year. We have been forced with great reluctance to accept the author's conclusion that, to se-

cure the best intellectual and physical development of girls, it is not best that they should receive the same training as boys. That while there is no reason why a girl shall not pursue the same studies as a boy, so far as her intellectual qualifications are concerned, there are grave physical reasons why she should not pursue them in the same unintermitting, sustained way that the boy does. A girl of sixteen is not able to do as much intellectual work as a boy of the same age, without serious injury to her health. This fact, it seems to us, Dr. Clark has conclusively proved. The logical sequence is that if our boys and girls shall all do the most they are capable of doing, and at the same time the health of the girls be preserved, the two sexes must not be educated in the same manner. In other words, a girl can not do her work in a boys way without endangering her health, and a boy will never do his best if required to keep pace with the girl who does no more than the ought to do. Here then is a new Scylla and Charybdis in the educational world. We are now waiting for the Ulysses that shall explore a way through the dangerous pass.

ART EDUCATION.

The importance of giving more instruction or different instruction in Art in the public schools of our State, is every day becoming more apparent. Indiana will at no very distant day be classed among the principal manufacturing States of the Union. Her mineral resources, especially her coal fields, are comparatively inexhaustible; and this fact will not fail to be appreciated at a time when England is awakening to the startling truth that her supply of coal is limited.

One of the not least important questions for the teacher to answer is, "What change in the kind or methods of my instruction does this prospective change in the commercial condition of our commonwealth demand?" The true teacher sees in the girls and boys now so entirely under his control and direction, the independent, active, uncontrolled men and women of the next generation, and he tries to picture to himself the conditions and relations under which they will be called to act. He is most worthy of his high calling when he forecasts the future, and prepares his pupils for it.

Education in Art has thus far been little more than an ornamental appendage tacked on to our school system. We believe that the time has come when it should be placed among the important studies in the school curriculum.

There are two different results that may be reached by Art Education. One is a means of acquiring wealth; the other, the cultivation of the æsthetic nature. The former has immediately in view its commercial value; the latter, its spiritual value.

While we would by no means undervalue the æsthetic, we believe that the first and primary business of the public school is to put into the hands of its pupils the tools with which they may best gain a livelihood. In order to live comfortably and happily, a large proportion of the human family will be compelled to labor,—it is to be hoped,—and the kind of labor that a mechanical district demands has an intimate relation to art culture, viewed from its commercial side.

The following, from the pen of Mr. Bartholomew, of Boston, illustrates our thought:

"A few days since I chanced to meet E. P. Morgan, Esq., mechanical engineer of the Saco Water-Power Machine Shop; and, in the course of our conversation he said that, through the inability of their workmen to understand a drawing, hundreds of dollars were lost every year. Now, what is true in this case is true of our manufacturing establishments all over the land. The time lost in doing that which must be done again because of error; the loss of material, the use of power, and the wear and tear of tools to no good purpose; the time of engineers and foremen spent in explaining drawings which would have been understood at a glance, had the workmen been instructed in drawing, and the time consumed in listening to these explanations,—costs the country, it is safe to say, millions of dollars annually. This, certainly, is an argument in favor of doing something towards giving our mechanics some knowledge of drawing."

To come back to the point which we started out to make, we would say that it is the business of the public school to teach Art with immediate reference to its value in the various mechanical pursuits that are so rapidly developing in our State. If this article were not already much longer than we had intended to make it, we would offer some suggestions concerning the work in detail. But this we will leave for some future time.

PERQUISITES.

In the December number we published an article in which we maintained that the 5th Section of the Act of March 8th, 1873, fixing the compensation of County Superintendents, did not forbid the County Commissioners to pay the necessary incidental expenses of this officer, such as traveling expenses, office rent, stationery, &c. Since that time the following opinions from two prominent law firms in this city have been received. The first is the opinion of Barbour, Jacobs & Williams. It is as follows:

"We have examined the provision of the last clause of the 5th Section of the School Law Acts, 1873, p. 78, in regard to "perquisites." The meaning is that he shall not receive any fees in addition to his salary which would increase his salary. It has no reference to his expenses, and any arrangement the County Commissioners may make with him in reference to his expenses, is a matter of business which is exclusively confided to them by the law, to be dealt with according to their best judgment."

The following is from Gordon, Browne, Lamb & Kimball:

"The term or word perquisite means 'something gained by a place or office beyond the regular salary or fee.' We are very clearly of the opinion that the word perquisite, as used in this section, was intended

to apply to compensation for services, and not to any necessary expenses incurred by the Superintendent in the discharge of the duties of his office, such as for rents, stationery, necessary traveling expenses and the like. The meaning of the section is that the four dollars per day shall cover the entire charge for the services of the Superintendent, and that he shall make no extra charge by way of fees for any service he may render, but it does not mean that he shall not be paid for any expenses necessarily incurred in the discharge of the duties of his office. If there are one hundred schools in the county he must, by the express provisions of the Law, be occupied one hundred days in visiting them, and to reach the schools must either hire a conveyance or use his own. If he hire a horse and buggy, the charge for their use will be at least four dollars per day, and if this item of expense must be borne by the Superintendent, on the same principle he must pay his own office rent, buy his own fuel, and furnish his own lights and stationery. It is very evident that under such a construction the Superintendent in this county would not only lose his entire time, but come out several hundred dollars in debt.

[THE following paper, it has been thought, discusses some subjects of interest to High Schools in general, and for that reason is published in the EDUCATIONIST. EDS.]

To the Board of School Commissioners:

GENTLEMEN:—The experience of the last two years has shown that some material changes are needed in the course of study prescribed for the High School, in order to meet the various demands of our community. Too much labor is required to complete the present course, and one of two evils results therefrom. Either the health of the pupil fails from overwork, or habits of indifference and superficial investigation are engendered.

I think that three severe studies are as many as any pupil should be required to pursue at one time. This would give more time for thorough investigation and avoid the tendency to desultory thought that now exists. Instruction in a High School is valuable not so much from the multitude of facts that are learned, as from the habits of thought and investigation that are formed. A few subjects, therefore, well mastered, as subjects, will be of much greater value to the future man or woman than a more elementary and comparatively superficial knowledge of many can be.

The aim of our work has been, and I think should be, to give to each pupil as complete a preparation for the active duties of life as it is possible for him to obtain in a four years' course. Our error has been that we have considered it necessary to teach him something of too great a range of subjects.

If the student leaves our school with a power to think, and by this I mean a power to generalize, he will have acquired that which will be of the greatest service to him in the future; and this power can be acquired in no other way so well as by the complete mastery of a few well selected subjects of study. By "complete mastery," I mean of course as complete a mastery as a young person is able to achieve during the first eighteen years of his life.

In selecting these subjects it is vitally [illegible]

allowance shall be made for the different classes of intellects that are to be developed. All minds are not alike, and ought not to be treated in the same way. Some cannot learn mathematics, and therefore cannot obtain any discipline from that study. To others the study of language and literature is distasteful because of their inability to appreciate these subjects. And yet both of these classes may be capable of acquiring the power of independent thought and generalization. One, however, must attain it by a different road from the other. To insist that each mind shall adapt itself to the same course is unjust, if not cruel.

While it is true that a large majority of those who attend our High School require no farther school education after leaving it, there is a growing demand for that kind of instruction which will fit young men and women for college, and it is probable that if these opportunities were afforded, the number who would take advantage of them and subsequently pursue a college course, would be greatly increased. So long as we discourage a college education by refusing to allow pupils to prepare for it in our High School, we both encourage our pupils to be satisfied with a comparatively low standard of scholarship, and also drive from our school those who intend to pursue a college course.

If the foregoing views are sound, their adoption would necessitate some radical changes in our present course of study. Upon this point I beg leave to offer the following suggestions:

I think all pupils should be required to pursue the same course of instruction during the first two years, but that from the beginning of the third year the studies should be to some extent elective.

This election should be made in accordance with one of three governing ideas, each of which may form the basis of a distinct course. The first of these we may call the practical or scientific, in which mathematics with its various applications, and the natural sciences shall constitute the leading subjects. The second may be called the classical, in which prominence shall be given to Latin and Greek languages, and such other subjects as will fit students to enter the best colleges. The third may have principally in view the study of History, Literature and Art, and may be called the general course. There would be subjects kindred to each one of these general ideas which all the pupils would study, and which would form a bond of union between the different departments.

Such a division as this could, I think, be made without much additional expense, and would afford an opportunity that is not now given to consult the individual tastes and peculiarities of students.

I would repeat also the suggestion that I have often made before, that a preparatory department be organized. The necessity for this becomes more and more apparent as the school increases in numbers. Such a department would do a work that the A. Intermediate grades cannot do, and the duller and weaker pupils could here receive that special training that they so much need to enable them to enter upon and complete successfully the work prescribed.

Respectfully submitted,

GEO. P. BROWN, Prin. High School.

Contributions.

EDUCATIONAL PSYCHOLOGY.—No. II.

BY WM. T. HARRIS.

ON THE STUDY OF THE CLASSICS.—*Continued.*

If a man does not know nor feel his existence, he cannot be said to live it as an independent existence. The humblest piece of dirt beneath our feet pulsates with vibrations that have traveled hither from the farthest star. But the clod does not know nor feel its community with the universe of matter. That universe does not exist for the clod, consequently the clod does not exist for itself. It is conscious communion with one's existence that makes it one's own. The more complete the consciousness the higher and more personal the being. The man who does not know his history nor the history of his civilization, does not consciously possess himself. His existence, as involved in those presuppositions, is not for him, is hence unassimilated, and therefore exists as his fate and not as his freedom. The first requisite for directive power is knowledge. Directive intelligence, knowledge itself, may ceaselessly modify the effects of its presuppositions as it finds them on itself, and by successive acts of the will may determine itself in accordance with its pure ideal. This is freedom.

When the scholar learns his presuppositions, and sees the evolution afar off, of the elements that have come down to him and entered his being; elements that form his life and make the conditions which surround him and furnish the instrumentalities which he must wield; then he begins to know how much his being involves, and in the consciousness of this he begins to be somebody in real earnest. He begins to find himself. The empty consciousness fills with substance—with its own proper substance; it "stands under" itself; rises from a particular special form of being to a generic, universal form thereof, which may be called culture.

Thus for ages the mind of youth has been trained in the schools on the two "dead languages," Latin and Greek. For the evolution of the civilization in which we live and move and have our being, issued through Greece and Rome on its way to us. We kindled our torches at their sacred flames. The organism of the State, the invention of the forms in which man may live in a civil community and enjoy municipal and personal rights—these trace their descent in a direct line from Rome, and were indigenous to the people that spoke Latin. In our civil and political forms we live Roman life to-day. That side or phase of the complex organism of modern civilization is Roman. Our scientific and æsthetic forms come from beyond Rome; they speak the language of their Greek home to this very day, just as much as jurisprudence and legislation pronounce their edicts in Roman words. Religion points through Greece and Rome to a beyond in Judea for a still deeper spiritual presupposition.

To assimilate this antecedent stage of existence, it is not sufficient to form an acquaintance with it by reading its history or literature in translations. It demands such an immediate contact with it as one gets by learning the languages of those people—the clothing of their inmost spiritual selves. We must don the garb in which they thought and spoke in order to fully realize in ourselves these embryonic stages of our civilization.

From the modern scientific idea of method we see the absolute necessity of mastering our history in order to know ourselves. We must take up into our consciousness our presupposition before we can be in a condition to achieve practical freedom. Just as the uncultivated person feels and knows his narrow circle of sensations, desires, appetites and volitions as his personal existence, his "ille," so the man of culture recognizes his identity with the vast complex of civilization, with the long travail of human history:

> "He omnipresent is,
> All round himself he lies,
> Osiris spread abroad,
> Upstaring in all eyes."

For he looks at himself through the eyes of mankind, and sees himself in mankind. History is the revelation of what is potentially in each man.

We may now inquire what aspect the question of the substitution of a modern language—say German or French—for Latin or Greek has. Is it not clear that a modern language stands to English in the relation of coördination and not in any sense in that of a presupposition? As immediate facts, German and French stand in need of explanation through evolution just as much as the English does. Their civilizations are not embryonic stages of English civilization, but rather repetitions of it. To suggest a study of German or French as a substitute for Latin or Greek would be paralleled in the science of zoology by suggesting a study of snakes instead of tadpoles in the embryology of the frog.

Greece and Rome stand at the entrance to the modern world or the Occidental phase in world history. Greece introduces the idea of individuality into history in place of the Oriental idea of substance. Rome deepens the idea of individuality to that of legal person. Both nations conquered the Orient; first Greece, under Alexander, avenged its wrongs, long suffered at the hand of Persia, by subduing Asia Minor, Syria, Egypt, Persia proper, Bactria and Western India. The Greek kingdoms in Asia Minor and Egypt were for centuries the seats of science. The Greek kingdoms in Syria and Bactria—no one knows how much the East Indians and Chinese owe to them in the way of scraps of science and art.

Then Rome brought under her yoke the western barbarians, rooted out Carthage and extended her sway to the east over Greece and the Greek empires, temporarily. The great modern States were born in the Roman colonies of the west, and were nurtured under her civil code of laws and with such Greek refinement as followed in the wake of Roman wealth and might. Finally Christianity, sheltered under the

Roman Eagle, found its way to all lands, destined to enter modern civilization, and under the threefold nurture of Roman laws, Greek science, and Christianity, the long education went on toward national independence and a humitarian civilization.

Discipline, culture, exactness of thought, refining influence are in a special sense results of classical study, inasmuch as it alone furnishes a direct road to the conscious possession of the conventionalities of our civilization. Greek gives the presuppositions of the theoretical intelligence. Latin that of the practical (or will side) of the intelligence. Mere disciplined ability to give attention to a subject connectedly is not adequate to give culture or exactness of thought. Mathematical drill suffices for that sort of discipline, but it is accompanied with the mental habit of abstracting from and ignoring quality, or the concrete relations of the most important of subjects—human life.

Why the argument in favor of Latin and Greek in education does not apply to oriental presuppositions beyond them, may be asked. The reply is two fold. The most important of the presuppositions mentioned, the theoretical and practical, are indigenous with those two peoples—the former with Greece, the latter with Rome. Oriental presupposition appears in Greece as the basis of myths and of the religious mysteries. The Myths represent the overthrow of the doctrine of substance by spiritual might—the Titans by the Gods of Olympus—Asiatic fate by European free personality.

The Roman presupposition appears still less to be derived (even negatively or by reaction like the Greek) from the Orient. But the presupposition of Christianity in Judaism is sufficiently emphasized in that part of our education which is left to the Church. The psychological discussion of this latter presupposition (Hebrew culture) is a very interesting one, but does not belong to this article.

PAPERS ON ARITHMETIC.—PART II.

NO. VIII.

OUTLINE OF A COURSE IN NUMBER FOR PRIMARY AND INTERMEDIATE SCHOOLS.

Remark. In the preceding papers of this series we have endeavored to show that *intelligent mind* and *pure time* are conditional for constructing the science of Number; that *pure period concepted* constitutes the *Unit* which is the basis of the science; that the unit *aggregated* gives rise to the Sum or Multiple; that the sum or multiple *segregated* (divided) gives rise to the difference or ratio; that combination, separation, and comparison constitute the operations to which numbers are subject; that the objective application of these operations, in obedience to their conditioning principles, constitutes the art of number; that the art is (logically) preceded or conditioned by the science.

To thus construct the science *a priori* requires a degree of reflective and intuitive power not found in young children, hence these are not in a condition to investigate number from its subjective side. The mental state of the child upon entering school is that of acute sense-perception, while the higher phases of intellectual activity are comparatively undeveloped.

Primary instruction, to be adapted to the condition of the child, must, therefore, be empirical.

"Proceed from the concrete to the abstract—from the known to the unknown—from the particular to the general"—is a principle from Pestalozzi, and it is a principle acknowledged by the successful teacher in the best primary schools of to-day. The various branches of both rational and empirical science taught in schools of higher grade, are preceded or introduced in the primary by lessons appealing to the faculties of perception and conception. These faculties exercised systematically and vigorously, so strengthen the mind that it soon receives power to exercise the higher faculties, *i. e.* reflection and intuition. Number, as well as other branches, is best taught through its application, or art. The child thus (*chronologically,*) sees the science from the art, instead of (*logically*) the art from the science. The reader will, therefore, readily see that a primary course upon Number must be so arranged that the faculties of the pupil will be appealed to and exercised in the natural order of their development. The following outlined course is arranged in view of the above facts, though in the limited space allotted to these papers, the work to be done can only be very briefly indicated. A few lessons will, however, be presented to suggest to the young teacher how he may proceed with others. The writer is under obligations to one of the ablest and most experienced primary teachers of the State for valuable suggestions in the preparation of the course herewith submitted.

GENERAL OBJECTS TO BE ATTAINED BY THE COURSE.

1. To form in the mind of the pupil ideas of numbers, and the operations of combining and separating them.
2. To furnish correct forms for expressing those ideas.
3. To teach classification of the elementary operations, definition of terms, and the cognition and statement of intuitive principles involved.
4. To induce habits of accuracy, rapidity, and neatness in performing operations, and in solving practical business problems.

FIRST YEAR'S WORK.

Objects to be Attained.

1. To form ideas of numbers to *ten.*
2. To teach addition, subtraction, multiplication, and division, no result exceeding *ten.*
3. To associate the results of operations with the numbers operated upon.

First Series of Lessons.—To Add by Ones.

I. *The Unit, or One.* The first work of the teacher upon beginning instruction in number, is to ascertain whether the pupil has a definite idea of the *Unit.* This may be done by presenting a pencil, or other object, and asking its name. If the answer be correct,

the teacher may at once ask, *how many?* If the pupil cannot give the term *one*, the teacher should do so, and proceed with other objects in like manner, until the pupil is able to apply the term properly by pointing to objects and saying, *one book, one chair*, etc.

Analysis of the above lesson. [See the "outline" in Paper No. VII. of this series.]

General Object.—To form ideas of numbers.

Specific Object.—To form idea of *one*, and apply it.

Conditional Ideas.—1. Of objects. 2. Of the names of objects. 3. Of language to express ideas about objects.

Involved Idea.—A single object is *one*.

Faculties Mainly Exercised.—1. The perceptive (presentative,) in viewing the individual object presented. 2. Judgment, in discriminating between *one* object and the indefinite, and as yet unknown, *not one*.

Plan.—The teacher presents object and obtains its name; obtains or gives term *one;* exercises the pupil's mind in applying the idea expressed by *one*, to objects present.

II. *One and One, or Two.*

Analysis. General Object.—The same as in lesson I.

Specific Object.—To form idea of *two*, and apply it.

Conditional Ideas.—Those involved in the concept *one*.

Involved Idea.—One and one viewed together are *two*.

Faculties Mainly Exercised.—1. The conceptive (representative,) in reproducing the concept formed in the preceding lesson. 2. The perceptive, in viewing the objects put together to form *two*. 3. Judgment, in discriminating between two objects and any other number.

Plan.—1. Review conditional ideas, i. e. previous lesson. 2. *Advance.* The teacher presents objects singly, and the pupil names them; obtains or gives term *two* in connection with the objects viewed together; exercises the pupil's mind in applying the idea expressed by *two* to objects present and absent.

Remarks. 1. Continue to combine one object with the number previously learned until the term *ten* has been given and applied.

In connection with this series of lessons, the pupil should have exercises in counting both forward and backward in order that he may conceive the different numbers as constituting a series, and that each number has its proper place in the series.

2. The lessons outlined above belong to the "ideal" course, and would seldom need to be given in an *actual* course, and indeed most pupils upon entering schools possess all the matter indicated in the above series. It is thought proper, however, to indicate the complete course from the beginning, leaving the teacher to determine, from the attainments of the pupil, at what point to commence work.

Second Series.—To add by *two's*, beginning with *one* and *two* are *three; two* and *two* are *four*, etc., to *ten*. Other series should follow in which the pupil adds by threes, fours, etc., to *ten*.

Remark. Since addition and subtraction are converse operations, they may be taught in immediate connection with each other. It is believed that a knowledge of each will be better retained by viewing it in contrast with the other.

The following *outline* of the first lesson in subtraction is given to indicate the manner of proceeding. It may be given either in connection with the second lesson in addition, or when the first series is reviewed. As each result is obtained by *addition*, it should be separated by removing one of the parts used in forming it. The idea of subtraction is thus attained.

LESSON IN SUBTRACTION.

Outline of Plan. 1. *Review.*—Combine one object with one object, thus forming *two*, the pupil stating what is done.

2. *Advance.*—Present the two objects and obtain their name and number. Remove one of them, the pupil stating what is done; also call attention to the remaining object, the pupil stating how many remain. Next obtain from the pupil a single statement embodying the above particulars. The formal statement usually given is: "*One from two leaves one.*" Some teachers prefer to substitute the words "*out of*" for "*from*" in the above statement, making it, "*One out of two leaves one.*"

Remark. The idea attached to the number to be separated is that of numerical capacity, and by the process of subtraction, a part of the *content* of that capacity is removed. It matters little whether we say of a given capacity that we take content *from* it or *out of* it. The teacher should be sure that the pupil has the correct idea involved, and then lead him to embody that idea in language which seems best suited to express it.

MULTIPLICATION.

In adding by two's, three's, etc., the pupil attains the idea of *constant addition*, which *memorized*, constitutes multiplication. [See Paper No. III of this series.] It may be presented by arranging objects or marks thus: | | | | | | | |. The pupil readily sees from this illustration, that *three two's are six*.

Such series of lessons should be given as will enable the pupil to make accurately and promptly all the multiplications possible at this stage of his mental development.

DIVISION.

Division is to be taught as the converse of multiplication, e., g., the pupil is led to see that in the above example, *six* may be obtained by combining *three two's*, and that since *three two's make six*, there are three two's *in* six. As each lesson in multiplication is given, it should be *converted*, and the process of division thus shown to be the converse of multiplication. Thus both operations are, from association by contrast, held more securely in the mind.

N. NEWBY.

AMBIGUITY IN ALGEBRAIC EXPRESSIONS.

BY W. D. HENKLE, SALEM, OHIO.

In the January EDUCATIONIST is a query as to what $2+2\times3+4$ equals. The answer is easy, but the question suggests more difficult ones. The following are specimens:

$$4+12\div2=? \quad (1)$$
$$18\div3+6\times4-1=? \quad (2)$$
$$6\times4\div2=? \quad (3)$$
$$6\div2\times3=? \quad (4)$$
$$4\times3\div2\times6=? \quad (5)$$
$$15\div5+6\div2\times4-14\times3\div6=? \quad (6)$$

A writer in the Ohio *Educational*, October, 1871, says "that in expressions containing only the signs $\times$ and $\div$, they should be used in precisely the order in which they occur." Another writer, December 1871, in criticising this says: "The sign of multiplication should have precedence, that is the operation indicated by it should be performed first, next comes division, then addition and subtraction."

The first statement is definite, but it is not in harmony with the conventions relating to algebraic signs; the second is neither definite nor in harmony with these conventions. According to the first

$$6\div2\div12\div6=1\text{-}24.$$

The second statement fails to say in what order successive signs of division are to be used.

According to the first statement the second members in the six equations above given are respectively 10, 29, 12, 9, 36, 8; according to the second, 10, 29, 12, 1, 1,—3¼.

Any number of factors (divisors being also included in this general term,) connected together constitute a monomial; hence $2+2\times3=2+6$, because 2×3 is a monomial. Each factor in a monomial expression is affected by all the factors that follow it. This statement enables us to determine the value of

$$6\div2\div12\div6.$$

Since 12 is affected by $\div6$, we have 2 instead of $12\div6$; hence, $6\div2\div12\div6=6\div2\div2$.

Since 2 is affected by $\div2$, we have 1 instead of $2\div2$; hence $6\div2\div2=6\div1=6$.

Hence $6\div2\div12\div6=6$.

In the same way

$$6\div4\times3\div4\div2\times3=\tfrac{1}{8}.$$

obtained thus $6\div4\times3\div4\div6=$

$$6\div4\times3\div\tfrac{2}{3}=$$
$$6\div4\times9\text{-}2=$$
$$6\div18=\tfrac{1}{3}.$$

The second members in the six equations above given are 10, 29, 12, 1, 1, —3¼. These are accidentally, the same as those given for the second statement.

The proper answer to the query in the EDUCATIONIST is that

$$2+2\times3+4=2\text{ , }6+4=12.$$

To indicate, without the aid of signs of aggregation successive operations, I suggest the use of commas, thus:

$$8,+3\div6,\times4,-6,\div4=\tfrac{1}{3}.$$

PSYCHOLOGY.—IV.

BY HARVEY W. WILEY, M. D.

It is now universally admitted that the cerebrum is that part of the nervous substance through which the higher mental powers are manifested. Here we approach a dangerous limit of scientific investigation. It is difficult to stop with facts and avoid speculations. The following things are known:

1. The cerebrum is not necessary to the continuance of organic and animal life. By organic life is meant the functional activity of the different organs of the body as the processes of digestion, absorption, assimilation, secretion, and the like; by animal life, the various movements, whether reflex or direct, and sensation in the general form and even in some special forms.

If the cerebrum be removed from an animal, the most prominent symptom manifested is a complete loss of all intelligence—a condition of stupor supervenes which is more or less complete, according to the grade of the animal. Some species of fish, for instance, seem to be little affected by the loss of the cerebrum. They will continue the ordinary movements of swimming with very little apparent disturbance. I once saw a catfish swim after its head had been severed from the body and the intestines removed. In higher orders of animals, such as pigeons, the stupor is more profound and there is little tendency toward voluntary movements. Some of the special senses, however, remain, as in the case quoted by Flint, from Bouillaud, where a candle was moved in a circle in front of a pigeon from which the cerebrum had been removed, the animal was noticed to follow with a distinct movement of the head the motion of the candle. In young cats and dogs similarly treated, Longet, also quoted by Flint, observed signs of disgust when a solution of colocynth was introduced into the mouth. The removal, therefore, of the cerebrum from animals, when carefully done, does not cause immediate death; on the contrary the animals may, with proper care, survive for an indefinite time after the operation, all the functions of organic and animal life being carried on with ordinary vigor.

2. The cerebrum has the same relation to mental activity that any other organ of the body has to its functions. When a muscle contracts it does so at the expense of a part of its tissue. When the liver secretes bile, it is itself to that degree disintegrated. So, likewise, whenever there is a mental act, a certain portion of brain substance is destroyed. It has for many years been known that after severe mental effort the amount of phosphates in the urine was largely increased This turned the attention of physiologists to the investigation of the changes of the brain in mental effort, and now no one doubts the constant relation between thought and brain disintegration. It is not our purpose here to speculate upon the existence of the soul, or the existence of mind separate from the brain. This is a question which is apart from the domain of science, and which if decided by science at

all, would be decided in the negative. As far, therefore, as we know anything of mind, it is simply functional activity of the cerebrum.

This would lead us at once to infer that there must be a definite relation between mental power and the development of the cerebrum. This is without doubt true. For many years physiologists have directed their attention to this point, but so far without any very definite results. The factors are so delicate, often so extra-physical, they so completely evade all ordinary methods of valuation, that the solution of the problem is of rare difficulty.

Somethings, however, seem to be pretty well made out—

(a) Generally men who are distinguished for intellectual power have large cerebra.

The whole brain of Cuvier, as given by Flint, weighed 64.3 oz.; of Abercrombie, the great physician, 63 oz.; of Ruloff, the murderer, a distinguished linguist, 59 oz.; of Fisk 58 oz, etc.

(b) The size of the head externally does not always indicate the size and weight of the brain.

Webster's brain weighed only 53 oz., yet the size of his head was remarkable; Agassiz's head was also very large, but if we may trust the account of the autopsy, the weight of the encephalon was only two or three ounces above the average, (49 oz.)

This discrepancy in weight and size is due to several causes. The principal of these are, 1st, the thickness of the skull, which in the case of Agassiz was very great, and 2d, the size of the ventricles of the brain, which are four sacks full of fluid found in the brain in health. In the case of Webster there was a great deal of fluid found in the ventricles.

(c) Mere size and weight of brain alone, however, are not accurate indices of mentality.

In the case of a day laborer of average intelligence the brain was found to weigh 54 oz. Flint cites a case from Wagner of the brain of a man, idiotic from infancy, which weighed nearly 55 oz.

(d) Very frequently marked intellectual vigor is found joined with small cerebral development.

A celebrated philologist, No. 25 in Flint's table, had a brain weighing only 48 oz., and a celebrated mineralogist, No. 40 in same table, worked with a brain below the average in the female, viz: 43 oz. Lord Bacon is said by many to have had a small head, although his brain is said to have weighed 79 oz., which is without doubt a mistake.

(e) The converse of (a) is true. Generally a small cerebrum is attended with deficient mental capacity.

No. 44 in table mentioned above, an idiot, had a brain weighing but 37 oz. No. 45, also an idiot, 36 oz. No. 46, idiocy profound, 34 oz.

ENGLISH LANGUAGE.—V.

BY GEORGE P. BROWN.

In the last number of this series, a classification of attributes was given. This brings us to a point in the progress of the work from which composition and grammar diverge. Since it is the design of these papers to first discuss language in its relations to Grammar, I shall leave the matter of composition for the present, with the view of taking it up by itself in the future. In the practical work of the class-room, however, it should be carried on side by side with the study of Grammar.

It has been said that "Language or speech starts from thought. We speak because we have a thought to communicate. All study of language and of literature must recognize thought as the prompting occasion, the originating, vital principle of all speech."

In order that thought may exist, there must be matter or objects about which we can think. These various objects of thought require for their expression, words, and the discussion of these words as to their form, arrangement and mutual relations in expressing thoughts, constitute grammar as it is generally understood. An object of thought may be defined to be "anything of which the mind can think." This object may be that of which we think something, and is then called the subject, or it may be that which we think of the subject, and is then generally called the attribute. "An object of thought" is a general term or name applicable to any matter of thought, whether used as subject or attribute. When it is used as subject it is then called "the subject of thought."

The subject of thought, which is one of the essential elements of a thought, is represented in all languages by a class of words called Nouns. It will not be understood by this that the noun can not be used in other relations than that of subject of the sentence. It is only intended to say that the *subject of thought* is always represented by a noun, either normal or abnormal. A noun, then, may be defined to be a word used to name an object of thought, which may be used as the subject of a sentence.

Nouns are generally separated by grammarians into two classes, upon the basis of use in naming an individual object or in naming a class of objects, and these classes are called proper and common nouns. Our previous investigations, however, have prepared the way for a classification anterior to this. It has been said that an *object* is only known to us through or by means of some attribute or attributes belonging to it. Now we may regard this attribute in immediate conjunction with the object to which it belongs, or separate and apart from it. In the first case the mind regards the *object* chiefly, and takes no special note of any *attribute* as such. In other words, the object is viewed *concretely*. Thus, the word "man" suggests to the mind an object having a number of attributes, but there is no severing of the attributes from the object, and no prominence is given to them, but rather the object and attributes are viewed in conjunction as a whole. The word "sun" suggests the ideas of brightness, roundness, in the heavens, etc., but it is the *object* and not any of its attributes that the mind chiefly regards. So with the words stove, George, Indianapolis, etc., etc.

In the second case the *attribute* is made the object of thought, and the object itself is made subordinate or is entirely neglected. The words manliness, morality, mortality, brightness, luminosity, etc., suggest to the mind attributes as existing separate and apart from any object, and hence they may be called abstract nouns.

It will be seen that each of these two classes of nouns, which we call concrete and abstract, admits of a sub-classification: the former into names of individual objects, or proper nouns; names of classes of objects, as man, boy, stone, etc.; and names of collections or groups of things, as flock, herd, assembly, etc.

So the abstract nouns may be names of qualities, of actions, and of relations; as, morality, brightness; breathing, growth; center, boundary, opposition.

School Officers' Department.

THE PLAN IN SHELBY COUNTY.

WORK OF THE COUNTY BOARD OF EDUCATION.

Sept. 1st, 1873. The County Board adopted text-books, requiring immediate uniformity in Spellers and Readers; the balance to be made uniform as soon as practicable.

Oct. 30th, 1873. The County Board adopted Rules and Regulations for the Public Schools, consisting of seventeen short, concise, practical rules, under the head of "Duties of Teachers," and five more under the head, "Duties of Pupils," closing with a request to parents soliciting their coöperation in carrying out said rules, and inviting them to visit the schools frequently. Three thousand of these were printed, and many of them distributed to patrons of the schools. Said Rules have been received with marked approval by the patrons, thereby giving the teachers a moral leverage in the control of their pupils they never possessed before, because, when the pupils realize that these Rules are not the teacher's alone, but the official promulgation of the County Board, backed up by public opinion, they yield to discipline at once; hence there are much fewer instances of insubordination this winter than usual.

Also, a Course of Study was prepared by the County Superintendent, and adopted by the Board, which was placed in the hands of teachers and school officers generally, so arranged as to introduce but one new branch of study in each grade, by means of which the schools have been partially graded already and an approximation to uniformity of studies secured. One thousand of these were printed, and they are serving to systematize the classification of our schools to a very large extent.

SCHOOL VISITING.

In visiting schools, we have no set formula or plan of proceeding, are governed principally by the peculiar circumstances of each school. We aim to give help where it is needed most, to ascertain the weak points, and give assistance where it will benefit most. If the teacher is a new man to us, young or inexperienced in the profession, we first see some of his work in conducting recitations, aiding him if necessary by friendly counsel and advice, sometimes hearing a class or two recite ourself for his benefit. If the teacher is doing well, using good methods of instruction, &c., we prefer "to let well enough alone." We never assume an air of authority in dealing with our teachers, but treat them with the utmost kindness and respect, ruling by reason alone, convincing their judgments, first being careful to place ourself on the right side of educational questions.

In addressing the pupils of the schools on such visits, we bear in mind the Jeffersonian motto, "Confer the greatest good upon the greatest number," often explaining to the school generally "how to study the spelling lesson," giving in connection therewith an explanation of the sound marks used in the spelling books, calling their attention to the key to the sounds of the letters at the foot of the page in Willson's Speller. On reading, we tell them "how to study the reading lesson," and "how to read, or talk it off the book." In arithmetic, we often solve some knotty problems on the black-board, or give some new method of calculation not in the text book. In grammar, we take up difficult points and illustrate them by examples, giving diagrams of the noun or verb, and their properties, analyze a sentence or two or parse some perplexing words or sentence which teachers often have laid up, waiting for us.

In performing our work, we make great use of the black-board, calling upon the pupils in arithmetic or grammar to assist us in doing the work, eliciting the answers by the art of questioning, which we learned while practicing law, and in this way take them through an indirect examination without their knowing it; this places them so completely at ease that they respond very readily, vieing with each other in the promptness of their answers. By this method we often succeed in giving such pupils a pretty thorough examination without their suspecting it, when, if we had called them out for a direct oral examination, they might have been frightened out of their wits, or ot least embarrassed to such a degree as not to be able to tell half what they knew.

In general remarks to the school, we dwell upon the duties of pupils to the teacher, the necessity of good lessons, careful study, value of the instruction now and in after life, obedience to the rules, advantages of learning all they can without aid from others, etc., usually occupying from ten to twenty minutes, not longer; children weary of long speeches much sooner than older persons; a public speaker should know when to quit as well as when to begin, of the two, *when to quit* is the most important. We always endeavor to quit before they are ready for us to quit, closing with words of commendation and encouragement, so as to leave a "good farewell" behind.

INSTITUTE WORK.

We have given special attention to Township Institutes, organizing and attending them as often as possible; and in order to give variety of work, and assist our teachers in making up their programmes for township meetings readily, we have prepared a list of about one hundred "Topics for Institutes," had it printed and sent to them through the hands of the Trustees. Our teachers delight in Institute work, discussing educational questions with all the eagerness and interest appertaining to energetic lyceums and debating societies.

We occasionally lecture on educational matters, but do not indulge in it to any alarming extent. When we do lecture, we make our remarks extemporaneous and spontaneous, limiting ourself to an hour, having plenty to talk about, and endeavoring to say something every time we open our mouth.

PLANS FOR THE FUTURE.

We contemplate a more thorough organization this year; expect to hear a report next month from each Township Trustee of the success in teaching of each and every teacher in his township. If any teacher falls below 80 per cent. in such report, he will be unable to procure a school in the county hereafter, no matter how good his scholarship. We also purpose inaugurating a system of monthly reports by teachers to the County Superintendent and Trustees both, in order that both may be kept constantly informed of the condition of the schools under their charge.

RICHARD NORRIS, County Supt.

Educational Intelligence.

We desire to give, as fully as our space will allow, the latest educational news of our own State, and hope our friends will afford us the necessary information. Notice of the time and place of all meetings of an educational character, together with changes of school officers, etc., etc., will be gladly received.

——Miss H. L. D. Potter, author of Potter's Manual of Reading, has been giving four or five weeks to Art Education in the Indianapolis Public Schools.

——We are still wanting a few April, May and June numbers of the EDUCATIONIST for last year. We shall be greatly obliged to any friend who will send us any of these numbers.

——In case our subscribers do not receive the EDUCATIONIST promptly, we shall take it as a favor if they will notify us at once. We shall take pleasure in sending the missing numbers.

——A postal card brings us the intelligence that Jos. Franklin, County Superintendent, and D. N. Berg, a prominent teacher of Madison county, open about the first of April the Anderson Graded and Normal School.

——J. C. Bailey, a Township Trustee of Jay county, affords strong testimony as to the good results that follow the holding of Township Institutes. Both teachers and patrons of schools manifest much interest in them.

——A call has been issued for a meeting of Superintendents to be held in Indianapolis, March 11, 1874. The call embraces Superintendents of cities of from 10.000 to 75,000 inhabitants in Indiana, Illinois, Michigan and Ohio.

——The Indianapolis Training School, on the 3d inst., graduated a class of nine young ladies. The following is a list of their names: Rosa Dark, Florence Fay, Mary Dye, Lizzie Hay, Chattie Dye, Isabella King, Emma Donnan, Mary Leonard, Mary Mather.

——Superintendent Henderson of Starke county, in a letter to the editors, says: Township Institutes of this county are a success. The teachers not only of the township attend, but from adjoining townships. We have had full school-houses generally. We think them a good thing, as they undoubtedly will be conducive to much good in our schools.

——The editor of the Northern Indiana Teacher is informed that the State Board of Education has not adopted for use in Indiana the "Smith System of Drawing." The State Board has the same authority to do so that the School Trustees of South Bend have, no more. Information is also given that Indianapolis has had a competent teacher of drawing for several years past.

——Logansport has just contracted for the erection of a school building to cost $48.000. Edwin May, of this city, is the architect. This to the average reader would seem enterprising, but if it could be generally understood that no city of the size in the country possesses poorer accommodations for the mass of her children, we imagine the general public would agree with us when we say an order for the erection of three houses, each to cost $16,000, would have been a much more signal exhibition of wisdom.

——A meeting of the State Board of Education will be held at the office of the Superintendent of Public Instruction, in this city, March 9, 1874.

——Superintendent Bowman, of White county, writes: "I am trying to awaken a deeper interest in education in White county. I usually visit two schools each day, and lecture at one of them in the evening. Teachers complain of the unwillingness of parents to get the necessary books, and the detention of their children at home for trivial causes. My experience, however, is that the cause of this complaint is more frequently the fault of the teachers than the parents. The qualified and enthusiastic teachers will generally secure the zealous co-operation of parents. I find most of the schools badly classified; Orthography, Reading, Writing and Arithmetic being almost the only studies pursued. In most of our townships, schools have not averaged more than three months, until this winter. We have now funds sufficient to keep schools open six months. But properly graded district schools and well qualified teachers are impossibilities until we have funds to keep our schools open nine or ten months in a year. Our township institutes are well attended both by teachers and the citizens of the vicinity in which the Institute is held. I am very much encouraged in my work by the interest manifested, in every place I go, by the mass of the people. Superintendents will be able to accomplish far more another year than they can this, in consequence of the acquaintance they are making with the teachers, people and work."

——Partial report of Superintendent to Board of School Commissioners, Indianapolis, made January 16, 1874: "I have visited within the past week all the private and parochial schools of the city, and submit herewith a tabular statement showing the number of pupils in attendance, the cost of tuition, &c. The facts here presented I believe to be as accurate and reliable as it is possible for me to ascertain them. It is intended in the several items reported to be an average showing for the year:

SCHOOLS.	No. of Tch'rs. Male.	Female.	Total.	Average of Pupils. Boys.	Girls.	Total.	No. of pupils ov'r 15 years of age.	L'th t'rm in mo's	Total cost of tuition.
St. John's Catholic	4	..	4	170	....	170	20	10	$ 1000
" " "	..	8	8	..	250	250	60	10	3085
" Mary's "	..	3	3	60	137	197	5	10	985
" Patrick's "	3	..	3	70	...	70	6	10	600
Miss Keating's	..	1	1	2	28	30	...	10	250
German Lutheran, No. 1	2	..	2	100	102	202	....	10	1485
" " No. 2	2	..	2	69	86	155	...	10	1007
Kryder's Ger.-Eng. School	1	1	2	48	52	100	....	10	900
Zion's Church School	1	..	1	20	20	40	...	10	200
Ger.-Eng. School	5	2	7	120	128	248	10	10	6200
Mueller's Ger.-Eng. Sch'l	2	..	2	125	75	200	6	12	2400
Mrs. Ashley's School	..	2	2	..	40	40	31	9	1800
Mrs. Price's School	..	1	1	22	17	39	11	10	1170
Misses McFarland's School	..	2	2	14	22	39	6	10	922
Totals	20	20	40	823	957	1780	155		$22,014

There are now in session, it will be seen from the above statement, fourteen private and parochial schools, affording employment to 40 teachers and instruction to 1780 pupils, at an annual expense of $22,014 for tuition alone, an average expense for each child of $12.31. The attendance at these schools may be classified as follows: In Catholic schools, 717; in German-English Church schools, 497; in German-English non-Sectarian Schools,

448; in strictly American schools, with English-speaking children, only 118. The number of pupils in this class of schools last year was 1839."

——EDITORS OF THE EDUCATIONIST:—Tippecanoe county is taking a forward stand in educational matters. The Trustees are a wide-awake class of men, and all, or nearly all, have levied a tax sufficient to have six months of public school. My opinion is that it should be raised to nine months. That length of free school, with a judicious compulsory educational law, would soon tell favorably on the intelligence of the youth of our State. Our County Institute met on the 22d day of December, and was well attended. Superintendent Hopkins lectured on Thursday evening on public school matters generally. In the course of his lecture he gave a great deal of statistical information relative to the school funds and school revenue of the State. On the whole his lecture was quite instructive. In this (Jackson) township we devote one Saturday in each month to Township Institutes. Thus far we have had very interesting sessions. At the November meeting three teachers were absent, and with that exception every teacher has been present every time. I must be allowed to say for the credit of my teachers that they are trying not only to make our Institutes pleasant but profitable. Our programme of exercises consists of reading the Scriptures and prayer on opening, calling the roll, reading minutes of last meeting and receiving monthly reports from teachers, class drills in the various branches, orations, essays, discussion on some subject pertaining to school government, or something bearing on the subject of education. At the close a programme for the next meeting (prepared by a business committee) is read by the Secretary. I wish to say a few words in regard to the duties of Township Trustees. Some think it the whole duty of a Trustee to receive and pay out the funds belonging to his township. This in my opinion is a great mistake. He should feel that for the present he is intrusted with the education of the children of his township, and that if they are not properly taught he is responsible. It is therefore necessary that he be an educated man, and that he employ the best teachers; and not only that, he should make himself familiar with the best modes of teaching. He should also visit every school under his control, and see as far as possible that every teacher does his duty.

C. Q. KIRKPATRICK, Trustee,
Jackson Tp., Tippecanoe Co.

——MESSRS. EDITORS OF THE EDUCATIONIST:—I send you a few notes on Hendricks county school matters, which may be given to the public if you think them of sufficient importance. We have 106 schools, and employ 87 male and 40 female teachers, and pay the males an average of $2.65 per day, and the females $2.25, which are better wages than were paid male teachers in any other county in Indiana last year, and we desire teachers to make a note of this, and that good ones may come this way next year, as I intend to excuse quite a number of incompetent ones and their places will be vacant We have a school term of about 110 days, which will be increased next year to 130. I have issued 116 certificates as follows: 20 first class, 27 second, 46 third, and 23 fourth, and I will say for the encouragement of the fourth class, that those who have been less successful in the school-room than we could wish, are by no means confined to them, but are found in every class, the first having its full ratio. The County Board of Education, duly appreciating the importance of the duty devolving upon it, at its September meeting began the work of unifying and organizing our schools into a county system by adopting rules and regulations for the government of the schools, and also with due regard to the pockets of the people, adopted text books for three branches, and prohibited changes from the books now in use in the other branches, without its consent. The authority of this Board, and the powers of the County Superintendents, were though to be tangible means of accomplishing very great improvement in our schools, and especially in those townships where the cause of education was at a low ebb with people, teachers and Trustees. But those hopes so fondly indulged in have vanished into thin air since the decision of the Department and Attorney General, making it a powerless *advisory* body, whose actions were not to be respected by or binding upon any one except itself, but whose members can return from its sessions and with impunity, in their single official capacity, nullify its actions and disregard its advice. The success of our township institutes has been various. In some townships much good has been done, while in others they have been flat failures. Their success has generally depended upon the interest taken in them by the Trustees. Our school houses are generally in excellent condition, and liberally supplied with educational appliances. The town of Danville has this winter completed a model school house, containing eight school rooms, and is perfect in all its appointments and finish, and reflects great credit upon its projectors and the citizens who have so liberally and willing supplied the means. It cost near $25,000.

JAMES A. C. DOBSON, County Superintendent.

Our Book Table.

WE HAVE received the number of the Irish Teacher's Journal and Magazine for January 31, 1874. It is a weekly journal, published by R. M. Chamney, Dublin, Ireland, in the interest of Irish education, and filled with excellent articles and well edited departments. The Journal is now in its 7th volume.

OLIVER OPTIC'S MAGAZINE for March contains three chapters from "The Coming Wave," by Oliver Optic; four from Prof. James DeMille's new story, "The Lily and the Cross," and two from "The Story of a Tomboy," by Geo. M. Baker. Then there are shorter articles, original dialogues, and other matters that will be puzzled over by young heads. Published by Lee & Shepard, Boston. $3 a year.

SCRIBNER'S MONTHLY for February abundantly sustains the reputation which it has in America and Europe. Those articles on "The Great South" are perfect treasures in matter and illustrations. This number contains something for every one from story to solid, weighty reviews. Dr. Holland's talks are of that wonderful kind, so simple that at first it seems that any of us could say what he does, but when we try we find that no one else can.

FIRST STEPS IN MUSIC, by George B. Loomis. Published by Ivison, Blakeman, Taylor & Co., New York.

The fourth number of this excellent series of music books has been recently published. This completes the work designed to be done by pupils in the grades below the High School. The author will, at no distant day, publish a fifth book for High Schools. There is no series of books that we have ever seen that is so well fitted for a thorough and complete mastery of the elements of musical science as this. The work is admirably graded, and the music is of the highest order. Especially is this latter statement true of the fourth book. We find then a large amount of music from the best masters, and accompanying it a choice selection of poetry. Both words and music can not fail to cultivate a taste for something better than the doggerel poetry and worse than doggerel melodies that compose most of our juvenile songs. To those teachers in graded schools who desire to teach music as thoroughly and systematically as they teach reading, we heartily recommend this series of music books.

SCHOOL COMPOSITION; being advanced language lessons for Grammar Schools. By Prof. Wm. Swinton, A. M. New York: Harper & Bros. J. M. Olcott, Agent, Indianapolis.

This little book is strictly a manual for school work, and has been made with special reference to the rational remodeling recently accomplished, or now in the way of being accomplished, in the courses of study in our public schools—a remodeling in which language –training for the first time receives the attention that is its due.

It is divided into Five Parts:

In Part I, the scholar is initiated into the construction and combination of sentences, under which head a great variety of practical exercises will be found.

In Part II, it is sought to extend his resources of expression by accustoming him to vary both the structure and the phraseology of sentences.

Part III, is an application of the principles already learned to easy composition exercises from OUTLINES.

In Part IV, what can advantageously be taught to boys and girls respecting STYLE is presented in a form which the author hopes will be found both fresh and fruitful.

Part V, deals with the composition of Themes and Essays on models adapted to a fair estimate of the pupil's capacity.

AHN'S FRENCH PRIMER, by Dr. P. Henn. Published by E. Steiger, New York.

This book is an introductory course, and treats principally of the correct French pronunciation, in which respect it supplies a want long felt. In most text-books the matter is not treated with the importance which it demands, since one of the greatest difficulties in the French language is a correct pronunciation, and, unless a pupil masters this at the very beginning of his study and learns the rudiments thoroughly, he can never become proficient in the language. The arrangement of the matter contained in the book is simple and concise. A very prominent and valuable feature in it is the *outline* and *hairline* type, used to represent the silent letters. This saves much time and needless trouble to both teacher and pupil, because the use of this type needs but one explanation on the part of the teacher, and it gives a correct training of the pupil's ear to the unfamiliar French sounds, as it will as well guard him against continually mispronouncing words, as also assist him in pronouncing them correctly at once. We think the book an excellent and valuable aid to all beginning the study of the French language.

Special Announcements.

A MARVELOUS COMBINATION of economy, taste, beauty, sentiment and artistic merit! A year's subscription for DEMOREST'S MONTHLY MAGAZINE, and the large and beautiful oil CHROMO, "The Old Oaken Bucket," presented as a premium. See the announcement in another column.

THE EDUCATIONIST, and any one of the following-named periodicals will be sent *one year*, commencing January, 1874, for $1 75:

1. The National Teacher, or Ohio Educational Monthly, Columbus, Ohio. E. E. White, Editor.

2. The National Normal, Cincinnati, Ohio. R. H. Holbrook, Editor.

3. Illinois Schoolmaster, Normal, Ill. Aaron Gove and E. C. Hewett, Editors.

4. Chicago Teacher, Chicago, Ill. Jeremiah Mahony, Editor.

5. Northern Indiana Teacher, South Bend, Ind. H. A. Ford, Editor.

The Indiana School Journal, with the EDUCATIONIST, $2 00.

This arrangement is made to accommodate a large number of our most active teachers who desire to read more than one educational journal. All orders should be sent to the Editors of the EDUCATIONIST.

Rosencranz's "Science of Education, or Pedagogics as a System," sent for a club of four, or for sale at $1 50.

Address EDITORS OF THE EDUCATIONIST,
Indianapolis, Ind.

EVERY school room should have the EDUCATIONIST School Mottoes. Twelve cards in a set. Sent post-paid by the Editors of the EDUCATIONIST upon receipt of 85 cents. The following are the mottoes:

"Who does the best he can, does well."
"Better be alone than in bad company."
"Be slow to promise, quick to perform!"
"Think, speak and act the truth!"
"The truly good are the truly happy!"
"As we sow so shall we reap!"
"He liveth long who liveth well!"
"Always ready!"
"I will never be late!"
"By perseverance we overcome difficulties!"
"Strive to please!"
"Learn to wait!"
"Dare to do right!"
"I can, if I will!"
"A fault confessed is half mended!"

These mottoes are a great hit, and any one who once gets them would not be without them.